TRIBOLIUM CASTANEUM (HERBST, 1797) (INSECTA, COLEOPTERA): PROPOSED CONSERVATION BY THE SUPPRESSION OF *TRIBOLIUM NAVALE* (FABRICIUS, 1775)

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The 'rust-red flour beetle' known as *Tribolium castaneum* (Herbst, 1797) is a cosmopolitan pest of stored products and an important laboratory insect in the fields of genetics, population studies and pest management. It has had six available names applied to it:

Dermestes navalis Fabricius, 1775 (p. 56)
Tenebrio ferrugineus Fabricius, 1781 (p. 324)
Colydium castaneum Herbst, 1797 (p. 282; pl. 112, fig. 13E)
Ips testaceus Fabricius, 1798 (p. 179)
Tenebrio bifoveolatus Duftschmid, 1812 (p. 304)
Uloma rubens Laporte de Castelnau, 1840 (p. 220).

2. Since their original publication, only the first three have been used as the valid name of the species, the others being quoted in synonymy.

3. *Colydium castaneum* is, by monotypy, the type species of *Tribolium* W. S. MacLeay, 1825 (p. 47), the generic name in modern usage. Its identity, found to agree with current interpretation, has been established by examination of the three female specimens so-named from Herbst's collection (now in the Museum für Naturkunde der Humboldt-Universität, Berlin) all agreeing with the original illustration (Herbst, 1797; pl. 112, fig. 13E) and all catalogued by Gerstaecker as 'nr. 47293'. One specimen, additionally labelled by Gerstaecker 'Castanea. n. Colydium cast. Ht. Trogosita ferruginea [sic] Fab. Tenebr. ferrugin Ol. Germ. Ind. or' is here designated as lectotype.

4. Waterhouse (1896, p. 230), by examining the original material, discovered that *Tenebrio ferrugineus* Fabricius, 1781 was not a synonym of *Colydium castaneum* Herbst, 1797. In the same year Champion (1896, p. 82) asserted that *Dermestes navalis* Fabricius, 1775 could not be one either, and after a later review of the situation by Blair (1913, p. 222) *Tribolium castaneum* (Herbst, 1797) won universal acceptance and has been consistently used as the valid name of the species for more than 60 years.

5. Champion stated (*loc. cit.*) that the original material of *navalis*, said by Fabricius to be in the Banks collection at the British Museum (Natural History), London, was missing. He based his interpretation of the species on a subsequent description by Fabricius (1792, p. 504). We believe that our recent search of the Banks collection has discovered the 'missing' material and that it is conspecific with *T. castaneum* (Herbst). A single specimen, although labelled 'chinensis?' in an unknown hand (*Dermestes chinensis* Fabricius, 1775, p. 58 is, according to Motschulsky (1858, p. 146), an anobiid belonging to the genus *Xyletinus* Latreille, 1810), is pinned and mounted on

identical paper in the same distinctive way as specimens of the same species in the Hunterian Museum in Glasgow and the Fabricius' own (Kiel) collection in Copenhagen, both standing as '*Dermestes navalis*'. We beleive they are all part of the same original series, are therefore confident of the Banks' specimen's authenticity, and have labelled it as lectotype.

6. It follows that the earliest available name for the 'rust-red flour beetle' is *Tribolium navale* (Fabricius, 1775). The first use of *T. navale* as the valid name for the taxon was by Seidlitz (1894, p. 583). He was followed by Heyden, Reitter & Weise (1906, col. 493). The last occasion of its use appears to have been that of Reitter (1911, p. 343). In the last 40 years, *Tribolium castaneum* (Herbst) has appeared in the titles and content of more than 30 papers in scientific journals and in over 100 research reports (Tribolium Information Bulletin) by at least 30 different authors. A representative list of references has been given to the Commission Secretariat.

7. The re-discovered identity of *Dermestes navalis* threatens the stability of a long-established and widely-used name. We consider that the evidence makes a *prima facie* case that this is so and we therefore ask the Commission on Zoological Nomenclature:

(1) to use its plenary powers to suppress the specific name *navalis* Fabricius, 1775, as published in the binomen *Dermestes navalis,* for the purpose of the Principle of Priority only;
(2) to place on the Official List of Generic Names in Zoology the name *Tribolium* MacLeay, 1825 (gender: neuter), type species by monotypy *Colydium castaneum* Herbst, 1797;
(3) to place on the Official List of Specific Names in Zoology the name *castaneum* Herbst, 1797, as published in the binomen *Colydium castaneum,* (specific name of the type species of *Tribolium* MacLeay, 1825);
(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *navalis* Fabricius, 1775, as published in the binomen *Dermestes navalis* and as suppressed in (1) above.

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